PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 15 JUN 2005
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Applicant's or agent's file reference 13888.2WOU1	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US 03/41469	International filing date *(day/month/year)* 22.12.2003	Priority date *(day/month/year)* 26.12.2002
International Patent Classification (IPC) or both national classification and IPC C09C1/36		
Applicant FENELON, Terry		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
23.07.2004	14.06.2005
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Siebel, E Telephone No. +31 70 340-1016

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US 03/41469

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-9 as originally filed

Claims, Numbers

1-13 received on 11.04.2005 with letter of 11.04.2005

Drawings, Sheets

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-13
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-13
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-13
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document :

D1: US 3,068,109 A

1.1. The document D1 discloses (the references in parentheses applying to this document) that Portland cement concrete my be integrally and decoratively coloured by mixing with the usual plastic Portland cement-sand-aggregate-water mixture, a pozzolanic material premixed with relatively small quantities of suitable mineral pigments, and preferably also premixed with a small amount of a dispersing agent for dispersing the pozzolanic material and the mineral pigment in the concrete. The colouring agent comprises a mixture of pozzolan and of brown iron oxide (Ration pozzolan to pigment 5:1 to 15:1) and 1.5 parts by weight of a dispersing agent for the pozzolan and iron oxide which are premixed to produce a colouring agent which gives an adobe colouration to the concrete mass (see D1, col. 1 line 20 to col. 2, line 5). The weight ratio of the pozzolanic material to the iron oxide is in the range of 5:1 to 15:1 and should be not less than 5:1 (see D1, col 2, line 15 to24; claim 2).

1.2. The subject-matter of claim 1 therefore differs from this known pigment agglomerate in that silica fume is used and the ratio of silica to inorganic pigment is from 0.5:10 to 3:10.

1.3. The subject-matter of claim 1 is new in the sense of Article 33(2) PCT.

1.4. The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 4, 6, 8 which therefore are also considered new.

2. The problem to be solved by the present invention in view of the distinguishing feature may therefore be regarded as to provide a pozzolanic material, in an amount which does not affect the colouring properties of the pigment which is able to increase the compressive strength of a cementious compound.

2.1. The solution proposed in claim 1 of the present application can be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

2.2. As stated in the description of the present application (see page 6, line 13 to 31) silica fume is known as a very reactive pozzolan or pozzolanic material and is further known as a cement additive. However, the prior art teaches that the use of less pozzolan (i.e. pozzolan : pigment must be 5:1 to 15:1) will result in a less intense colour, as the beneficial effect of the pozzolan as an intensifier of the colouring property of the pigment will be reduced. Furthermore, the use of less pozzolan will result in a non-uniformity of the colour. (see D1, col.2, line 15 to line 24). The advantages thus achieved could therefore not be foreseen.

3. The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 4, 6, 8 which therefore are also considered not inventive.

4. Dependent claims 2,3,5,7, 9-13 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

I claim:

1. A pigment agglomerate comprising:

(a) a plurality of pigment particles; and

(b) a plurality of silica fume particles held to the pigment particles by interparticle forces, wherein a weight ratio of the silica fume particles to the pigment particles is about 0.5:10 to 3:10.

2. The pigment agglomerate according to claim 1, wherein the pigment particles are iron oxide.

3. The pigment agglomerate of claim 1, wherein the interparticle forces is at least one of magnetic forces, electrostatic forces, and van der Waal's forces.

4. A pigment agglomerate consisting essentially of:

(a) a plurality of pigment particles; and

(b) a plurality of silica fume particles,

wherein a weight ratio of the silica fume to the pigment particles is about 0.5:10 to 3:10.

5. The pigment agglomerate according to claim 4, wherein the pigment particles are iron oxide.

6. A pigment agglomerate consisting only of:

(a) a plurality of pigment particles; and

(b) a plurality of silica fume particles,

wherein a weight ratio of the silica fume to the pigment particles is about 0.5:10 to 3:10.

7. The pigment agglomerate according to claim 6, wherein the pigment particles are iron oxide.

8. A method of making a pigment agglomerate comprising:

(a) mixing a plurality of pigment particles with a plurality of silica fume particles, at a weight ratio of 0.5:10 to 3:10 silica fume particles to pigment particles, the mixing being done with a rolling motion.

9. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles comprises:

(a) mixing a plurality of iron oxide particles with the plurality of silica fume particles.

10. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion in a barrel mixer, a tumbler, or a ribbon mixer.

11. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of iron oxide particles with a plurality of silica fume particles with a rolling motion in a barrel mixer, a tumbler, or a ribbon mixer.

12. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion in a barrel spinning or tumbling about its longitudinal axis.

13. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of iron oxide particles with a plurality of silica fume particles with a rolling motion in a barrel spinning or tumbling about its longitudinal axis.